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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,717	04/04/2001	Tomohiro Kimura	041465-5107	1757

9629 7590 08/10/2004

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EXAMINER

COUSO, YON JUNG

ART UNIT PAPER NUMBER

2625

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,717

Applicant(s)

KIMURA, TOMOHIRO

Examiner

Yon Couso

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2, 5-8, 11-16, 18, 20, 22 and 24 is/are rejected.
7) ☒ Claim(s) 3, 4, 9, 10, 17, 19, 21 and 23 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 6/4/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant's arguments filed June 4, 2004 have been fully considered but they are not persuasive.

a. The objection made to the title and the claims have been withdrawn in response to the amendment.

b. The applicant argues that the intra-field dispersion value used in the claimed language is different from the one cited in the rejection. Applicant further indicates what the intra-field dispersion value is in accordance to the applicant's specification, namely, a difference between luminance in each pixel contained in each of two field images configuring one frame image and an average value of the luminance in one field image (page 13, lines 8-11). The examiner notes that this is not a limitations in claims 1,7, 13, and 15. Applicant is reminded of 37 CFR 1.111(b) which states that, a "general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirement of this section".

However, it is noted that the claims including this limitations have been objected (claims 17, 19, 21 and 23) and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-6, 8, 12-16, 18, 20, 22, and 24 are rejected under 35 U.S.C.

§ 102(b) as being anticipated by Fernando et al., Fade and Dissolve Detection in Uncompressed and Compressed Video Sequences.

For claim 1, an image change detecting apparatus for detecting generation of a fade change in image information containing a plurality of field images is provided by Fernando in at least the abstract, where an MPEG (or H.263) video sequence for example contains frames and fields, and corresponds to Applicant's disclosed MPEG video sequence. The image change detecting apparatus comprising a dispersion value detecting device for detecting each of intra-field dispersion value in each field image is provided by Fernando in sections 3-4 on pages 300-302, by using a variance for each frame and fields corresponding to Applicant's dispersion, where Applicant's disclosure indicates that the dispersion is a measure of variation. An average direct current level detecting device for detecting each of intra-field average direct current levels in each field image is provided by Fernando in sections 3-4 on pages 300-302, where Fernando recites a mean, i.e. average, with respect to the DC levels. A detecting device for detecting whether or not the fade change occurs based on a change of the detected intra-field dispersion value and a change of the detected intra-field average direct current level is also explicitly provided by Fernando in sections 3-4 on pages 300-302.

For claim 2, the image change detecting apparatus according to claim 1, wherein the detecting device detects that the fade change occurs in the plurality of the continuous field images when the detected intra-field dispersion value and the detected intra-field average direct current level change linearly altogether relevant to a plurality of the continuous field images is provided by Fernando in Figs. 1-2, where the DC is linear during the fading in and out, and the dispersion variance is substantially linear, and is linear in portions during the fading in and out, and as an additional argument, the two metrics together are linear within the fading regions in Fig. 3.

For claim 5, the image change detecting apparatus according to claim 1, wherein the detecting device detects that the fade change from the field images of single black color occurs in the plurality of the continuous field images relevant to the plurality of the continuous field images when the detected intra-field dispersion value and the detected intra-field average direct current level each have a positive gradient and changes linearly is provided by Fernando in Figs. 1-2, where the DC is linear during the fading in and out, and the dispersion variance is substantially linear, and is linear in portions during fade in from black or a solid color (e.g. black) as taught by Fernando in section 2 on pages 299-300.

For claim 6, see the rejection of at least claim 5.

For claim 8, see the rejection of at least claim 2.

For claim 12, see the rejection of at least claim 5.

For claim 13, see the rejection of at least claim 1.

For claim 14, see the rejection of at least claim 2.

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For claim 15, see the rejection of at least claim 1, and note that Fernando explicitly provide for an "algorithm" in at least the abstract.

For claim 16, see the rejection of at least claim 2.

For claims 18, 20, 22 and 24, Fernando teaches that the intra-field dispersion value has a linear behavior during fade-in and fade-out (figure 2).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernando et al., Fade and Dissolve Detection in Uncompressed and Compressed Video Sequences, as applied to claims above, and in view of Legall et al., 5,872,598.

For claim 7, an image encoding apparatus including an image change detecting apparatus for detecting generation of a fade change in image information containing a plurality of field images, the image change detecting apparatus comprising: a dispersion value detecting device for detecting each of intra-field dispersion value in each field image; an average direct current level detecting device for detecting each of intra-field average direct current levels in each field image; and a detecting device for detecting whether or not the fade change occurs based on a change of the detected intra-field dispersion value

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and a change of the detected intra-field average direct current level is provided by Fernando where cited above for claim 1. The image encoding apparatus further comprising: an encoding device for changing an encoding parameter in encoding of the detected subsequent image information, thereby encoding the image, when it is detected that the fade change occurs is not explicitly provided by Fernando, although this is a very common use such as for scene change detection. Legall similar to Fernando, uses the DC average and alternatively use a dispersion by activity, and provide for changing the encoding parameter in at least section G in c. 12 to send an indication to the coders controller to change the sequence of an appropriate frames, so that in the case of a scene change, either a P or I frame is used. It would've been obvious to one having ordinary skill in the art at the time the invention was made to change the parameter of the encoding based on the fade detection, since Legall teaches changing to an I or P frame, which provide for higher fidelity than B frames as well as a decreased number of bits in the case of fading as taught by Legall in section G in c. 12.

For claim 11, see the rejection of at least claim 5.

4. Claims 3-4, 9-10, 17, 19, 21, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

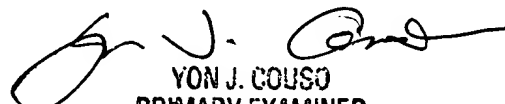
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779. The examiner can normally be reached on 8:30 am –5:00 pm from Monday to Friday

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.


YON J. COUSO
PRIMARY EXAMINER

Yjc

August 6, 2004